REMARKS

Claims 1 to 7 were pending in the present application. Applicant has amended claims 2 and 6. Claims 1 to 7 remain pending.

Amendments to the Specification and the Drawings

Applicant has amended paragraph [0001] to cross reference related applications.

Applicant has amended paragraphs [0036] and [0096] to remove attorney docket numbers and to add application serial numbers.

Applicant has added paragraphs [0020.1], [0121.1] to [0121.12], and Fig. 11, which correspond to paragraphs [0018] on p. B3, paragraphs [0088] to [0099] on pp. B23 to B26, and Fig. 8 on p. B40 of provisional application 60/409,311, which was incorporated by reference in the present application.

Request for Documentation

The Examiner asked the Applicant to submit documentation of prior art that the Examiner may find similar to the claimed invention that could reasonably be used in a § 102 or 103 rejection. Accordingly, the Applicant has concurrently submitted an information disclosure statement citing documentation of prior art.

The Examiner asked the Applicant to discuss correspondence between elements of independent claims 1 and 5 with the prior art identified in the background. The background only discloses network storage systems in general. There is no direct correspondence between the elements of independent claims 1 and 5 with the prior art identified in the background.

The Examiner asked the Applicant to discuss the elements of independent claims 1 and 5 with respect to the prior art identified in the information disclosure statement submitted on August 12, 2005. Applicant has not provided such a discussion because Applicant wishes the Examiner to review the present application unbiased from Applicant's characterization of the prior art. Applicant notes there is no requirement under 37 C.F.R. §§ 1.105, 1.56, 1.97, and 1.98 to provide such a discussion.

The Examiner asked the Applicant to show support for independent claims 1 and 5 in the provisional application 60/409,311. Applicant has provided the support in the table below.

Claim 1 (original): A snapshot tree structure, comprising:	The snapshot tree may be snapshot tree 2000 shown in Fig. 8, p. B40, and generally described in paragraphs [0088] to [0099] on pp. B23 to B26.
a base volume storing a current user data; a first snapshot descending from the base volume, the first snapshot being created at a first time, the first snapshot comprising: a first table comprising a first plurality of entries corresponding to first portions of block addresses; a second table comprising a second plurality of entries corresponding to second portions of the block addresses; a third table comprising a third plurality of entries corresponding to third portions of the block addresses;	The base volume may be base volume 2200 shown in Fig. 8, p. B40, and generally described in paragraph [0089] on p. B23. The first snapshot may be any snapshot shown in Fig. 8, p. B40, and generally described in paragraphs [0090] and [0091] on p. B24. The tables of the first snapshot may be L1, L2, and L3 tables shown in Figs. 7, p. A35, and generally described in paragraphs [0074] to [0085] on pp. A17 to A21.
wherein: one of the first plurality of entries contains a pointer to the second	The entries may be entries in L1, L2, and L3 tables shown in Figs. 7, p. A35, and generally described in paragraphs [0074] to [0085] on pp. A17 to A21.

table;	
one of the second plurality of entries contains a pointer to the third table;	
one of the third plurality of entries contains a pointer to a data of the base volume at the first time before the data is modified in the base volume;	
a second snapshot descending from the first snapshot, the second snapshot being created at a second time earlier than the first time.	The second snapshot may be any snapshot that descends from another snapshot shown in Fig. 8, p. B40, and generally described in paragraphs [0091] on p. B24.

Claim 5 (original): A method for creating a snapshot tree structure, comprising:	The snapshot tree may be snapshot tree 2000 in shown in Fig. 8, p. B40, and generally described in paragraphs [0088] to [0099] on pp. B23 to B26.
creating a base volume;	The base volume may be base volume 2200 shown in Fig. 8, p. B40, and generally described in paragraph [0089] on p. B23.
at a first time, creating a first snapshot descending from the base volume, said creating a first snapshot comprising:	The first snapshot may be any snapshot shown in Fig. 8, p. B40, and generally described in paragraphs [0090] and [0091] on p. B24.

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creating a first table comprising a first plurality of entries corresponding to first portions of block addresses;	The first table may be a L1 table shown in Fig. 7, p. A35, and generally described in paragraphs [0074] to [0085] on pp. A17 to A21. The first table may be created as shown in step 802 of Fig. 9, p. A38, and generally described in paragraph [0109].
after said creating a first snapshot, receiving a write to a data block in the base volume at a block address;	A write to a data block is shown in step 804 of Fig. 9, p. A38, and generally described in paragraph [0110].
in response to said receiving a write, copying an original value of the data block to the first snapshot, comprising: creating a second table comprising a second plurality of entries corresponding to second portions of block addresses; writing one of the first plurality of entries corresponding to a first portion of the block address with a pointer leading to the second table; creating a third table comprising a third plurality of entries corresponding to third portions of block addresses; writing one of the second plurality of entries	The second and the third tables may be L2 and L3 tables shown in Fig. 7, p. A35, and generally described in paragraphs [0074] to [0085] on pp. A17 to A21. The second and the third tables may be created as shown in steps 812, 814, 820, 822, 828, and 830 of Fig. 9, p. A38, and generally described in paragraphs [0111] and [0115].

corresponding to a second portion of the block address with a pointer leading to the third table; writing the original value of the data block to a new data block; writing one of the third plurality of entries corresponding to a third portion of the block address with a pointer leading to the new data block;	
writing a new value in the data block in the base volume;	The writing of the new value into the base volume is shown in Fig. 7, p. A35, and generally described in paragraph [0075], p. A17.
at a second time after the first time, creating a second snapshot descending from the base volume, said creating a second snapshot comprising: creating another first table comprising the first plurality of entries corresponding to the first portions of block addresses;	The second snapshot may be any snapshot that descends from another snapshot shown in Fig. 8, p. B40, and generally described in paragraph [0091] on p. B24. The first table may be a L1 table shown in Fig. 7, p. A35, and generally described in paragraphs [0074] to [0085] on pp. A17 to A21.
inserting the second snapshot between the base volume and the first snapshot, wherein the first snapshot now descends from the second snapshot.	The second snapshot may be any snapshot that descends from another snapshot shown in Fig. 8, p. B40, and generally described in paragraph [0091] on p. B24.

Summary

In summary, claims 1 to 7 were pending in the present application. Applicant has amended claims 2 and 6. Applicant requests the Examiner to allow claims 1 to 7 and issue a notice of allowance. Should the Examiner have any questions, please call the undersigned at (408) 382-0480x206.

Respectfully submitted,

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